

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

Claim 1 (Previously Presented) A biomedical device comprising a substrate and a polypeptide growth factor associated with the substrate by covalent bonding using crosslinking agents, antibody-antigen associations, specific binding protein-receptor associations or enzyme-substrate associations, wherein the crosslinking agents comprise at least two aldehyde functional groups that form covalent bonds to link the crosslinking agent directly with the polypeptide growth factor and the substrate, the polypeptide growth factor associated with the substrate being effective to stimulate association of viable cells with the substrate.

Claim 2 (Canceled)

Claim 3 (Previously Presented) The biomedical device of claim 1 wherein the crosslinking agent comprises difunctional aldehydes.

Claim 4 (Previously Presented) The biomedical device of claim 3 wherein the difunctional aldehyde comprises glutaraldehyde.

Claims 5-7 (Canceled)

Claim 8 (Previously Presented) The biomedical device of claim 1 wherein the substrate comprises tissue.

Claim 9 (Previously Presented) The biomedical device of claim 1 wherein the substrate comprises human tissue.

Claim 10 (Previously Presented) The biomedical device of claim 1 wherein the substrate is selected from the group consisting of porcine tissue, bovine tissue, kangaroo tissue, canine tissue and a combination thereof.

Claims 11-12 (Canceled)

Claim 13 (Previously Presented) The biomedical device of claim 1 wherein the polypeptide growth factor comprises vascular endothelial growth factor.

Claim 14 (Previously Presented) The biomedical device of claim 1 wherein the polypeptide growth factor comprises Tat protein.

Claim 15 (Previously Presented) The biomedical device of claim 1 wherein the biomedical device comprises an artificial organ, a heart valve prosthesis, an annuloplasty ring, a stent, a pledget, suture, an electrical lead, a permanently in-dwelling percutaneous device, an AV shunt, a vascular graft, a dermal graft or a surgical patch.

Claims 16-27 (Canceled)

Claim 28 (Previously Presented) A biomedical device comprising a biocompatible substrate and a polypeptide growth factor associated with the biocompatible substrate, the polypeptide growth factor being effective to stimulate association of viable cells with the substrate, wherein the polypeptide growth factor comprises Tat protein.

Claim 29 (Previously Presented) The biomedical device of claim 28 wherein the biocompatible substrate comprises tissue.

Claim 30-32 (Canceled)

Claim 33 (Previously Presented) The biomedical device of claim 28 further comprising an adhesive, the adhesive being associated with the polypeptide growth factor and the substrate.

Claim 34 (Previously Presented) A biomedical device comprising a substrate and a polypeptide growth factor associated with the substrate by antibody-antigen associations, specific binding protein-receptor associations or enzyme-substrate associations, the polypeptide growth factor associated with the substrate being effective to stimulate association of viable cells with the substrate.

Claim 35 (Previously Presented) The biomedical device of claim 34 wherein the biocompatible substrate comprises tissue.

Claim 36 (Previously Presented) The biomedical device of claim 34 wherein the biocompatible substrate comprises a synthetic material.

Claim 37 (Previously Presented) The biomedical device of claim 34 wherein the substrate comprises a bioresorbable material.

Claim 38 (Previously Presented) The biomedical device of claim 34 wherein the polypeptide growth factor is associated with the substrate by antibody-antigen associations.

Claim 39 (Previously Presented) The biomedical device of claim 34 wherein the polypeptide growth factor is associated with the substrate by specific binding protein-receptor associations.

Claim 40 (Previously Presented) The biomedical device of claim 34 wherein the polypeptide growth factor is associated with the substrate by enzyme-substrate associations.

Claim 41 (Currently Amended) A prosthesis comprising:
a substrate of the prosthesis; and
a polypeptide growth factor associated with the substrate, the polypeptide growth factor being effective to stimulate association of viable cells with the substrate,
wherein said polypeptide growth factor comprises Tat protein.

Claim 42 (Previously Presented) The prosthesis of claim 41 further comprising an adhesive, the adhesive being associated with the polypeptide growth factor and the substrate.

Claim 43 (Previously Presented) The biomedical device of claim 28 further comprising a crosslinking agent, said crosslinking agent associating the growth factor to the biocompatible substrate.

Claim 44 (Previously Presented) A prosthesis comprising a substrate and a polypeptide growth factor associated with the substrate, the polypeptide growth factor being effective to stimulate association of viable cells with the substrate, said polypeptide growth factor comprising Tat protein, said polypeptide growth factor is associated with the substrate by covalent bonding using crosslinking agents, antibody-antigen associations, specific binding protein-receptor associations, enzyme-substrate associations, or an adhesive.

Claim 45 (New) A biomedical device comprising a substrate and a polypeptide growth factor crosslinked to the substrate by covalent bonding using crosslinking agents, wherein the crosslinking agents comprise at least two aldehyde functional groups that form covalent bonds to link the crosslinking agent directly with the polypeptide growth factor and the substrate, the polypeptide growth factor associated with the substrate being effective to stimulate association of viable cells with the substrate.

Claim 46 (New) A prosthesis comprising a substrate and a polypeptide growth factor crosslinked to the substrate by covalent bonding using crosslinking agents, wherein the crosslinking agents comprise at least two aldehyde functional groups that form covalent bonds to link the crosslinking agent directly with the polypeptide growth factor and the substrate, the polypeptide growth factor associated with the substrate being effective to stimulate association of viable cells with the substrate.